



<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/674,666	
	Filing Date	September 29, 2003	
	First Named Inventor	Mike Clark	
	Art Unit	Not Yet Assigned	
	Examiner Name	Not Yet Assigned	
Total Number of Pages in This Submission	14	Attorney Docket Number	PHOE0001-100

ENCLOSURES (check all that apply)				
<input type="checkbox"/> Fee Transmittal Form  <input type="checkbox"/> Fee Attached  <input type="checkbox"/> Amendment / Reply  <input type="checkbox"/> After Final  <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input checked="" type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Response to Missing Parts/ Incomplete Application  <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s)  <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition  <input type="checkbox"/> Petition to Convert to a Provisional Application  <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):  <b>References I-M; A1-A79</b>		
<table border="1"><tr><td>Remarks</td><td></td></tr></table>			Remarks	
Remarks				

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	David A. Sadewasser/Reg. No. 55,587
Signature	<i>David A. Sadewasser</i>
Date	<i>March 11, 2004</i>

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PHOE0001-100



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: Mike Clark

Serial No.: 10/674,666

Group Art Unit: Not Yet Assigned

Filing Date: September 29, 2003

Examiner: Not Yet Assigned

For: METHODS FOR INHIBITING VIRAL  
REPLICATION IN VIVO

DATE OF DEPOSIT: March 11, 2004  
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David A. Sadewasser  
TYPED NAME: David A. Sadewasser  
REGISTRATION NO: 55,587

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §§ 1.56 and in accordance with 37 C.F.R. §§ 1.97 and 1.98, information relating to the above-identified application is hereby disclosed, the Examiner in charge of the above-identified application is requested to consider and make of record the references listed on the PTO Form SB/08A and PTO Form SB/08B, formerly known as PTO Form 1449 submitted herewith.

Inclusion of the information submitted herewith is not to be construed as an admission that the information is material as that term is defined in 37 C.F.R. § 1.56(b).

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

**This Information Disclosure Statement is being filed:**

- ☐ within three months of the filing date of the patent application.
- ☐ within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 of the international application.
- ☒ **before** the mailing date of a first Office Action on the merits.
- ☐ **after** the mailing date of a first Office Action on the merits, but before the mailing date of a Final Office Action under 37 C.F.R. § 1.116 or a Notice of Allowance under 37 C.F.R. § 1.311, and accordingly is accompanied by:
- ☐ the Statement under 37 C.F.R. § 1.97(e) (see "Statement" below);
- or**
- ☐ the Fee of \$180.00 set forth in 37 C.F.R. § 1.17(p); or
- ☐ No fee is owed by the applicant(s).
- ☐ In accordance with 37 C.F.R. § 1.129(a), this Information Disclosure Statement is being filed in connection with ☐ the first or ☐ second After Final Submission, and accordingly is accompanied by the Statement under 37 C.F.R. § 1.97(e) (see "Statement" below) and the fee of \$180.00 as set forth in 37 C.F.R. § 1.17(p), is attached.
- ☐ **after** the mailing date of a Final Office Action under 37 C.F.R. § 1.116 or a Notice of Allowance under 37 C.F.R. § 1.311, but before, or simultaneously with, the payment of the Issue Fee, and accordingly is accompanied by the Statement under 37 C.F.R. § 1.97(e), a Petition requesting consideration of the Information Disclosure Statement and the Petition Fee of \$130.00 set forth in 37 C.F.R. § 1.17(i)(1) (see "Statement," "Petition," and "Fees" below).
- ☒ Copies of references (I-M and A1-A79) listed on the attached PTO Form SB/08A and PTO Form SB/08B, formerly known as PTO Form 1449 are enclosed.

**EXCEPT THAT:**

- ☐ In view of the voluminous nature of reference @ @, and the likelihood that this reference is available to the Examiner, copies are not enclosed herewith.
- ☐ In accordance with 37 C.F.R. § 1.98(d), copies of the following references listed on the attached PTO Form SB/08A and PTO Form SB/08B, formerly known as PTO Form 1449 are not enclosed herewith because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application(s) for which a claim for priority under 35 U.S.C. § 120 have been made in the instant application.

- ☐ Copies of references listed on the attached PTO Form SB/08A and PTO Form SB/08B, formerly known as PTO Form 1449 were previously cited by or submitted to the U.S. Patent and Trademark Office in parent application Serial No. 10/417,820 filed on April 16, 2003.
- ☐ If any of the foregoing publications are not available to the Examiner, Applicant will endeavor to supply copies at the Examiner's request.

**Statement under 37 C.F.R. § 1.97(e)**

- ☐ The undersigned attorney hereby states that each item information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.

**Fees**

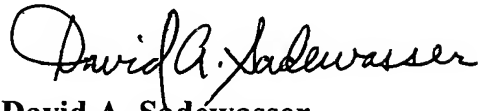
- ☒ No Fee is owed by the applicant(s).
- ☐ The Information Disclosure Statement Fee of \$180.00 under 37 C.F.R. § 1.17(p) is enclosed herewith.
- ☐ The Petition Fee of \$130.00 under 37 C.F.R. § 1.17(i)(1) is enclosed herewith.

**Method of Payment of Fees**

- ☐ Attached is a check in the amount of \$\_\_\_\_\_. This form is submitted in duplicate.
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☒ No fee or Statement is required under 37 C.F.R. § 1.97(b).

Respectfully submitted,



**David A. Sadewasser**  
**Registration No. 55,587**

Dated: March 11, 2004

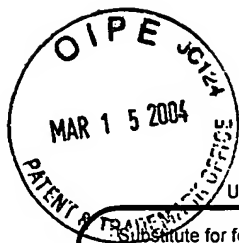
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Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	PHOE0001-100

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(use as many sheets as necessary)

Sheet

2

of

9

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Application Number	10/674,666
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First Named Inventor	Mike Clark
Group Art Unit	Not Yet Assigned
Examiner Name	Not Yet Assigned
Attorney Docket Number	PHOE0001-100

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

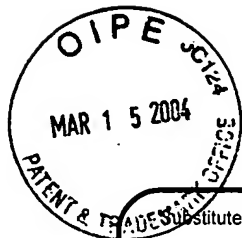
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	A1	SUN, et al., "Incidence and cofactors of hepatitis C virus-related hepatocellular carcinoma: a prospective study of 12,008 men in Taiwan," Am. J. Epidemiol. (2002) 157:674-682.	
	A2	HERRINE, "Approach to the patient with chronic hepatitis C virus infection," Ann. Intern. Med. (2002) 136:747-757.	
	A3	HOOFNAGLE, "Course and outcome of hepatitis C," Hepatology (2002) 36:S21-S29.	
	A4	LAUER and WALKER, "Hepatitis C virus infection," (2001) N.Engl. J. Med. (2001) 345:41-52.	
	A5	LIANG, et al., "Prognosis, natural history, treatment, and prevention of hepatitis C," Ann. Intern. Med. (2001) 132:296-305.	
	A6	SHIRATORI, et al., "Interferon therapy after tumor ablation improves prognosis in patients with hepatocellular carcinoma associated with hepatitis C virus," Ann. Intern. Med. (2003) 138:299-306.	
	A7	SMITH, et al., "Identification of novel tumor markers in hepatitis C virus-associated hepatocellular carcinoma," Cancer Res. (2003) 63:859-864.	
	A8	YOSHIZAWA, "Hepatocellular carcinoma associated with hepatitis C virus infection in Japan. Projection to other countries foreseeable future," Oncology (2002) 62 (Supp. 1):8-17.	
	A9	COLOMBO, "Natural history and pathogenesis of hepatitis C virus related hepatocellular carcinoma," J. Hepatol. (1999) 31 (Supp 1):25-30.	
	A10	EL-SERAG, "Hepatocellular carcinoma and hepatitis C in the United States," Hepatology (2002) 36:S74-S83.	
	A11	RYDER, "Guidelines for the diagnosis and treatment of hepatocellular carcinoma (HCC) in adults," Gut (2003) 52 (Supp III):iii1-iii8.	

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Sheet	3	of	9	Attorney Docket Number	PHOE0001-100

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	A12	EL-SERAG, "Global epidemiology of hepatocellular carcinoma," Clin. Liver Dis. (2001) 5:87-107.	
	A13	DiMAIO, et al., "Hepatocellular carcinoma: systemic treatments," J. Clin. Gastroenterol. (2002) 35 (Supp. 2):S109-S114.	
	A14	CURLEY, et al., "Radifrequency ablation of hepatocellular cancer in 110 patients with cirrhosis," Ann. Surg. (2000) 232:381-391.	
	A15	WATKINS and CURLEY, "Liver and bile ducts," in Clinical Oncology, 2nd ed., Abeloff, et al., eds., New York, pp. 1681-1748, 2000.	
	A16	ENSOR, et al., "Pegylated arginine deaminase (ADI-SS PEG 20,000 mw) inhibits human melanomas and hepatocellular carcinomas in vitro and in vivo," Cancer Res. (2002) 62:5443-5447.	
	A17	TAKAKU, et al., "Chemical modification by polyethylene glycol of the antitumor enzyme arginine deaminase from Mycoplasma arginini," Jpn. J. Cancer Res. (1993) 84:1195-1200.	
	A18	TAKAKU, et al., "In vivo anti-tumor activity of arginine deaminase purified from Mycoplasma arginini," Int. J. Cancer (1992) 51:244-249.	
	A19	SUGIMURA, et al., "High sensitivity of human melanoma cell lines to the growth inhibiting activity of Mycoplasma arginini deaminase in vitro," Melanoma Res. (1992) 2:191-196.	
	A20	ROSE, "Amino acid requirements of man," Fed. Proc. (1949) 8:546-552.	
	A21	SNYDERMAN, et al., "The arginine requirement of the infant," J. Dis. Child (1959) 97:192.	
	A22	SHEN, et al., "Resistance to the anti-proliferative activity of recombinant arginine deaminase in cell culture correlates with the endogenous enzyme, argininosuccinate synthetase," Cancer Lett. (2003) 191:165-170.	

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	A23	FALCK-YTTER, et al., "Surprisingly small effect of antiviral treatment in patients with hepatitis C," Ann. Intern. Med. (2002) 136:288-292.	
	A24	FRIED, "Side effects of therapy of hepatitis C and their management," Hepatology (2002) 36:S237-S244.	
	A25	FRIED, et al., "PEGinterferon alpha-2a plus ribavirin for chronic hepatitis C infection," N.Engl. J. Med. (2002) 347:975-982.	
	A26	MANN, et al., "PEGinterferon alpha-2b plus ribavirin compared with interferon alpha 2b plus ribavirin for initial treatment of chronic hepatitis c: a randomized trial," Lancet (2001) 358:958-965.	
	A27	DANTZLER and LAWITZ, "Treatment of chronic hepatitis C in nonresponders to previous therapy," Curr. Gastroenterol. Rep. (2003) 5:78-85.	
	A28	MASCI, et al., "New and modified interferon alfas: preclinical and clinical data," Curr. Oncol. Rep. (2003) 5:108-113.	
	A29	CHANDLER, et al., "Treatment of chronic hepatitis C: a systematic review," Hepatology (2002) 36:S135-S144.	
	A30	DiBISCEGLIE and HOOFNAGLE, "Optimal therapy of hepatitis C," Hepatology (2002) 36:S121-S127.	
	A31	LINDSAY, "Introduction to therapy fo hepatitis C," (2002) Hepatology (2002) 36:S114-S120.	
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	A33	WEDEMEYER, et al., "Polyethylene glycol-interferon: current status in hepatitis C virus therapy," J. Gastroenterol. Hepatol. (2002) 17 (Supp 3):S344-S350.	

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Sheet 5 of 9

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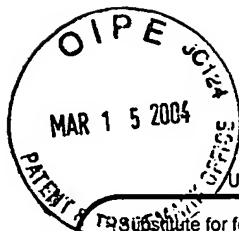
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	A34	McHUTCHINSON, et al, "Interferon alfa-2b alone or in combination with ribavirin as initial treatment for chronic hepatitis C," N. Eng. J. Med. (1998) 339:1485-1492.	
	A35	DIAMOND and LEE, "Use of antiviral therapy in patients with hepatitis C," Ann. Intern. Med. (2002) 137:1012.	
	A36	JOHNSTON and HOTH, "Present status and future prospects for HIV therapies," Science (1993) 260:1286-1293.	
	A37	RICHMAN, "HIV therapeutics," Science (1996) 272:1886-1888.	
	A38	CHRISTIE and CHAPMAN, "Combination therapy for chronic hepatitis C: interferon and ribavirin," Hosp. Med. (1999) 60:357.	
	A39	ROUSE, et al., "Dependence of adenovirus replication on arginine and inhibition of plaque formation by pleuropneumonia-like organisms," Virology (1963) 20:357-365	
	A40	TANKERSLEY, "Amino acid requirements of herpes simplex virus in human cells," J. Bacteriol. (1964) 87:608-613.	
	A41	GOLDBLUM, et al., "Effect of withdrawal of arginine and other amino acids on the synthesis of tumor and viral antigens of SV40 virus," J. Gen. Virol. (1968) 3:143-146.	
	A42	MINIMISHIMA and BENYESH-MELNICK, "Arginine-dependent events in cytomegalovirus infection," Bacteriol. Proc. (1969) 170:334-339.	
	A43	LEVINE, et al., "Late stage synchronization of respiratory syncytial virus replication," Virology (1971) 45:390-400.	
	A44	WINTERS, et al., "A non-functional arginine biosynthetic pathway in polyoma-infected mouse embryo cells," Biochem. Biophys. Res. Comm. (1972) 47:1045-1051.	

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	10/674,666		
		Filing Date	September 29, 2003		
		First Named Inventor	Mike Clark		
		Group Art Unit	Not Yet Assigned		
		Examiner Name	Not Yet Assigned		
Sheet	6	of	9	Attorney Docket Number	PHOE0001-100

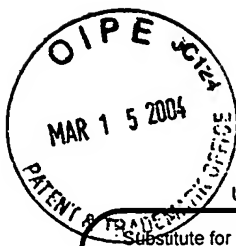
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	A45	IINUMA, et al, "Studies on the assembly of Newcastle disease virus: an arginine-dependent step in virus replication," Virology (1973) 51:205-215.	
	A46	ROMANO and SCARLATA, "Amino acid requirements of measles virus in HeLa cells," Arch. Gesamte Virus Forschung (1973) 43:359-366.	
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 7 of 9

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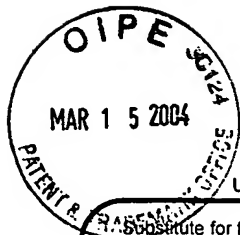
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	A62	KONDO, et al., "Cloning and sequence analysis of the arginine deaminase gene from Mycoplasma arginini," Mol. Gen. Genet. (1990) 221:81-86.	
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	A65	MONFARDINI, et al. "A branched monomethoxypoly(ethylene glycol) for protein modification," Bioconj. Chem. (1995) 6:62-69.	
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Sheet 8 of 9	Attorney Docket Number	PHOE0001-100	

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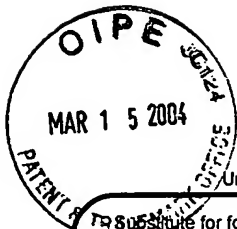
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	A67	OGINSKY, "Isolation and determination of arginine and citrulline," Meth. Enzymol. (1957) 3:639-642.	
	A68	OHNO, et al., "Cloning and nucleotide sequence of the gene encoding arginine deaminase of Mycoplasma arginini," Infect. Immun. (1990) 58:3788-3795.	
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	A76	TESKE, et al., "Polyethylene glycol-L-asparaginase versus native L-asparaginase in canine non-Hodgkin's lymphoma," Eur. J. Cancer (1990) 26:891-895.	
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	A78	DILLON, et al., "Biochemical characterization of the arginine degrading enzymes arginase and arginine deaminase and their effect on nitric oxide production," Med. Sci. Monit. (2002) 8:CR248-CR253.	
	A79	THOMAS, et al., "Enzymic degradation of plasma arginine using arginine deaminase inhibits nitric oxide production and protects mice from the lethal effects of tumour necrosis factor alpha and endotoxin," Biochem. J. (2002) 363:581-587.	

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